<u>**REMARKS**</u>

Claims 25-59 are currently pending in the subject application and are presently under consideration. Claims 25, 48 and 58 have been amended as shown on pp. 3, 6 and 8 of the Reply. In addition, the specification has been amended as indicated on p. 2.

Applicant's representative thanks the Examiner for discussing the subject Response over the telephone on October 5, 2007. The subject amendments are believed by applicant's representative to place the application in condition for allowance. The Examiner noted that the amendments must officially submitted rather than presented in draft form, and that he would conduct a supplemental search in view of the amendments.

Favorable reconsideration of the subject patent application is respectfully requested in view of the comments and amendments herein.

I.   <u>Rejection of Claims 25-44, 46, 47 and 58 Under 35 U.S.C. §101</u>

Claims 25-44, 46, 47 and 58 rejected under 35 U.S.C. §101 because the claimed invention is directed to non-statutory subject matter. This rejection should be withdrawn for at least the following reasons. Independent claim 25 has been amended to recite a computer readable storage medium to overcome the deficiencies related to this rejection. Furthermore, the subject claims, as amended, produce a useful, concrete, and tangible result.

> Because the claimed process [method] applies the Boolean principle to ***produce a useful, concrete, tangible result*** ... on its face the claimed process comfortably falls within the scope of §101. *AT&T Corp. v. Excel Communications, Inc.*, 172 F.3d 1352, 1358. (Fed.Cir. 1999); *See State Street Bank & Trust Co. v. Signature Fin. Group, Inc.*, 149 F.3d 1368, 1373, 47 USPQ2d 1596, 1601 (Fed.Cir.1998) (finding a system implementing a financial management structure satisfied §101 because it constituted a practical application of a mathematical algorithm by producing a useful, concrete and tangible result).

As provided above, the legal standard set forth by the Federal Circuit in *AT&T Corp. v. Excel Communications, Inc.* for determining whether a claim is directed towards statutory subject matter is whether a claim can be applied in a practical application to produce a useful, concrete, and tangible result. The subject claims relate to a database manager that employs the determined set of values to determine an entry of a database to prune such that the entry when

removed has minimal effect on accuracy of prediction. Determination of an entry is a useful, concrete, and tangible result.

In view of at least the foregoing, it is readily apparent that applicant's invention as recited in independent claims 25 and 58 (and associated dependent claims 26-44, 46, 47 and 58) is statutory subject matter and produces a useful, concrete, and tangible result. Accordingly, withdrawal of this rejection is respectfully requested.

II.   Rejection of Claims 25-34, 36-44, 46-55 and 57-59 Under 35 U.S.C. §103(a)

Claims 25-34, 36-44, 46-55 and 57-59 stand rejected under 35 U.S.C. §102(b) as being anticipated by Robinson (US 5,884,282) in view of Altschuler, *et al.* (US Patent 6,012,052). This rejection should be withdrawn for at least the following reasons. Robinson alone or in combination with Altschuler, *et al.* does not teach or suggest each and every aspect of the subject claims.

Applicants' claimed subject matter discloses a recommendation technique called "personality diagnosis", which is a hybrid between memory-based and model-based collaborative filtering techniques. In particular, independent claims 25, 48 and 58, as amended, recite similar aspects, namely, *employing a generated set of values to at least one of minimize the number of explicit queries to the user while maximizing the accuracy of the recommendations or determining an entry of a database to prune such that the entry when removed has minimal effect on accuracy of the recommendations.* Robinson, alone or in combination with Altschuler, *et al.,* fails to teach this novel aspect.

Robinson teaches a collaborative filtering system that merely compares ratings of items of an active user with previously obtained ratings of items of a plurality of disparate users to generate a prediction and/or provide the active user with a recommendation. Robinson relates to a system that determines a similarity value for a first user as compared with disparate users that have provided a rating for items rated by the first user. However, Robinson does not disclose utilizing *personality types* as claimed and defined in the specification to generate predictive values for unknown attributes as recited in the subject claims and defined in the specification. The examiner asserts on page 5 of the Office Action (dated July 9, 2007) that Robinson discloses the personality types as defined by the applicant. However, applicants' representative respectfully disagrees with the assertion. A *personality type* is defined in the specification as a

vector of the user's "true" values for attributes in a database, where "true" values are obtained by assuming that users report values with a distributed error (*See* pg 15, lines 10-17). Robinson does not consider that a user can alter attributes depending on context (*e.g.,* time of day, current mood of the user, …), and fails to disclose contemplating that users report values with distributed error. Furthermore, Robinson is silent with respect to employing a generated set of values to **minimize the number of explicit queries** to the user while maximizing the accuracy of the recommendations and/or **determining an entry of a database to prune** such that the entry when removed has minimal effect on accuracy of the recommendations.

Applicants' claimed subject matter relates to a system and method that predicts and selectively collects attribute values based on personality diagnosis. Using personality diagnosis, all data may be maintained throughout the process, new data can be added incrementally, and predictions have meaningful probabilistic semantics. Furthermore, predictions are employed to determine expected value of collecting additional information. An interactive recommender can employ the expected value of information to favorably order queries for attribute values (e.g., item ratings), thereby mollifying what could otherwise be a tedious and/or frustrating process. Such a value of information computation can balance the costs and/or difficulty of answering a question about preferences with the expected value of information being acquired. Additionally, the value of information can be employed to generate the most valuable *n* questions to ask if a system designer would wish to limit the number of questions asked of users or accessed from a database of preferences. The expected value of information can also be employed to determine which entries of a database to prune, such that, the entries if removed, would have a minimal effect on accuracy of recommendations for a population of users (*See* page 15, lines 21-32 and page 16, lines 1-10). The system discloses a query cost-benefit analyzer that employs the determined set of values to minimize the number of explicit queries to the user while maximizing accuracy of a calculated personality probability and a database manager that employs the determined set of values to determine an entry of a database to prune such that the entry when removed has minimal effect on accuracy of prediction. Robinson, alone or in combination with Altschuler, *et al.,* does not teach the above-mentioned novel aspects.

Altschuler, *et al.* relates to a system and method for building resource and attribute transition probability models for pre-fetching resources, editing resource link topology, building resource link topology templates and collaborative filtering. Altschuler, *et al.* fails to teach or

suggest a system that employs personality types to predict attribute values. Furthermore, Altschuler, *et al.* does not teach limiting the number of explicit queries and/or pruning a database based on an expected value of information and thus does not remedy the aforementioned deficiencies of Robinson with respect to the subject claims.

In view of at least the foregoing, it is readily apparent that Robinson, alone or in combination with Altschuler, *et al.* fails to teach or suggest all features of applicants' invention as recited in independent claims 25, 48 and 58 (and claims 26-34, 36-44, 46-47, 49-55 and 57-59 that depend therefrom), and thus fails to make obvious the subject claims. Accordingly, it is respectfully requested that this rejection be withdrawn.

III.   Rejection of Claims 35 and 56 Under 35 U.S.C. §103(a)

Claims 35 and 56 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Robinson (US 5,884,282) in view of Altschuler, *et al.* (US Patent 6,012,052) as applied to claims 34 and 48 above, and further in view of Knight, *et al.* (US 6,571,234). This rejection should be respectfully withdrawn for least of the following reasons. Robinson alone or in combination with Altschuler, *et al.* or Knight, *et al.* does not teach or suggest each and every aspect of the subject claims.

Claims 35 and 56 depend from independent claims 25 and 48 respectively. Knight, *et al.* relates to a system and method for managing an online message board. Specifically, the system teaches eliminating or pruning unpopular categories of data to reduce clutter on an interface seen by a user. However, Knight, *et al.* does not teach removal of attributes <u>that add little benefit to the accuracy of recommendations, from a database</u>. Applicants' subject claims, in contrast, relate to a system that employs expected value of information to prune entries (e.g. attributes) from those stored to reduce time and space complexity (*See* page 30, lines 24-32 and page 31, lines 1-11). Knight, *et al.* fails to cure the aforementioned deficiencies of Robinson and Altschuler, *et al.* with respect to independent claims 25 and 48 and thus it is requested that this rejection be withdrawn.

CONCLUSION

The present application is believed to be in condition for allowance in view of the above comments and amendments. A prompt action to such end is earnestly solicited.

In the event any fees are due in connection with this document, the Commissioner is authorized to charge those fees to Deposit Account No. 50-1063 [MSFTP293USA].

Should the Examiner believe a telephone interview would be helpful to expedite favorable prosecution, the Examiner is invited to contact applicants' undersigned representative at the telephone number below.

Respectfully submitted,

AMIN, TUROCY & CALVIN, LLP

  /Himanshu S. Amin/

Himanshu S. Amin

Reg. No. 40,894

AMIN, TUROCY & CALVIN, LLP
24TH Floor, National City Center
1900 E. 9TH Street
Cleveland, Ohio 44114
Telephone (216) 696-8730
Facsimile (216) 696-8731